FIRST COURSE ON PARTIAL DIFFERENTIAL EQUATIONS - II

PROF. A.K. NANDAKUMARAN/ P.S. DATTI
Department of Mathematics
Indian Institute of Science/ TIFR-CAM

TYPE OF COURSE : New | Core | PG
COURSE DURATION : 8 Weeks (23-Aug’ 21 - 15-Oct’ 21)
EXAM DATE : 23 Oct 2021

PRE-REQUISITES : First Course on Partial Differential Equations – I (Video Course), Functional Analysis, Integration Theory

INTENDED AUDIENCE : Mathematics, Science and Engineering

COURSE OUTLINE :
This is intended to be a first course on the subject Partial Differential Equations, which generally requires 40 lecture hours (One semester course).

ABOUT INSTRUCTOR :
A.K. Nandakumaran is a Professor at the Department of Mathematics, Indian Institute of Science, Bangalore.

P.S.Datti is a former faculty at TIFR-CAM, Bangalore.

COURSE PLAN :
Week 1: Hamilton Jacobi Equations
Week 2: Conservation Laws
Week 3: Conservation Laws
Week 4: Laplace and Poisson Equations – Further topics
Week 5: Laplace and Poisson Equations – Further topics
Week 6: Multi-Dimensional Heat Equation
Week 7: Multi-Dimensional Wave Equation
Week 8: Introduction to Weak solutions